

Claims

- [c1] In a tape recording device, comprising:
- a supply reel and a take-up reel, a head for recording data to the tape or reading data from the tape or both, a servo system capable of moving the tape between the supply reel and the take-up reel past said head; a recording system, comprising:
 - an actuator capable of moving said head across the recording surface of said tape;
 - a flexure having a first end attached to the head and a second end attached to the actuator;
- whereas the flexure is biased against the tape and therefore urges the head towards the tape; and whereas the flexure allows the head to move so that the head surface is substantially aligned with the tape.
- [c2] A recording system of claim c1 further comprising a spring;
- whereas the spring provides a bias and thus pushes the head towards the tape.
- [c3] A recording system of claim c1 further comprising a means to stabilize the tape at the recording area.
- [c4] A recording system of claim c3, whereas the stabilizer is a hydrodynamic bearing.
- [c5] A recording system of claim c3, whereas the stabilizer is a dual bump hydrodynamic bearing and the stabilized area is between the two bumps.
- [c6] A recording system of claim c3, whereas the stabilizer is a hydrostatic bearing.
- [c7] A recording system of claim c3, whereas the stabilizer is a roller bearing.
- [c8] A recording system of claim c3 further comprising:
- a second flexure having a first end attached to the actuator and a second end attached to a guiding block.

- [c9] A means to stabilize the tape according to claim c8 whereas the guiding block is a second recording head.
- [c10] A recording system according to claim c3 further comprising a means to separate the recording head from the stabilizer to allow the head to move in and out of the tape thread path.
- [c11] A mechanism to separate the head from the stabilizer according to claim c10 comprising:
- a solenoid having a plurality of positions,
 - a plurality of rods movably attached to the solenoid;
 - whereas the rods separate the head from the tape when the solenoid is in a first position; and
 - whereas the rods allow the head to contact the tape when the solenoid is in a second position.
- [c12] In a tape recording device, comprising:
- a supply reel and a take-up reel, a head for recording data to the tape or reading data from the tape or both, a servo system capable of moving the tape from the supply reel to the take-up reel past said head;
 - whereas the length of the head is substantially less than the width of the tape.
- [c13] A tape drive according to claim c12 whereas the length of the head substantially matches the width of a track group.
- [c14] A tape drive according to claim c12 whereas the length of the head is less than 50% of the width of the tape.